

1 significance of the 7.5 percent figure at the bottom of that
2 page?

3 A Yes. At this time we would have known that 5 percent
4 was satisfactory in killing the microorganism. We wanted a
5 safety margin to allow for a possible fall in concentration
6 in storage so we selected 7.5. This would be once again a
7 step into the unknown because we had not done that before.
8 So the 7.5 I have written down there, rates, which refers to
9 check the stability, having put ethanol into that
10 concentration, the taste, which is another example of
11 considering the patient, perhaps when we change the
12 concentration, does it change the peppermint flavor in any
13 way, because we had other experience with some of the other
14 preservatives where there had been changes in tastes as a
15 result of changing the preservatives, and also clarity.
16 Would the elegance of this product be affected in any way?
17 We saw the product here yesterday, it's a gleaming
18 bottle and a crystal clear fluid. We had to check that there
19 wouldn't be any haze developing, which is a possibility,
20 having seen on other products the cellulose forming a haze when
21 certain constituency were varied, either by concentration or
22 the actual constituent. So 7.5, to sum up, the target we
23 were going for, but there were some things to check for.
24 Q Doctor, based on that testimony, does that take us
25 right through the July-October 1985 time period on what I

referred to previously as the '249 patent time line?

A Yes, that takes up that period.

Q The event at the end of October states Dr. Long concluded that 7.5 percent weight/volume ethanol would be included in the Zantac Syrup formulation to ensure a minimum of 5 percent weight/volume ethanol would remain in the product throughout its assigned shelf-life.

A Yes, it does.

Q At this point in time had you invented anything, in your opinion, adding the 7.5 percent ethanol to the syrup?

A No, because to add alcohol to a syrup is fairly ordinary mundane activity. It was well known that alcohol was contained in syrups.

Q At this point you had successfully killed the *Pseudomonas cepacia* problem; is that correct?

A I had killed that -- I had selected the ethanol, which had killed the *Pseudomonas cepacia*. So that is, that's an advance in science so it is a discovery.

Q That's not the subject of your invention; is that correct?

A No, indeed it's not.

Q You never claimed an invention for killing the *Pseudomonas cepacia*; is that correct?

A No, there is no claim for that at all.

Q Were you involved in stability testing of the revised

1 A The conclusion that is stated here it says the
2 calculations formed here indicate that, one, ethanol enhances
3 stability of ranitidine; two, PET is a better container than
4 glass with respect to ranitidine.

5 Q And can I also direct your attention to page 84468 and
6 can you read for the record what the conclusion is stated
7 there?

8 A In conclusion, the weight of evidence would imply that
9 alcohol imparts a genuine stabilizing effect with respect to
10 ranitidine.

11 Q So, Doctor, is it correct to say that the discovery of
12 the enhancements that occurred upon the addition of alcohol
13 to the Zantac Syrup formulation came as a result of the
14 stability analysis that was carried out under your direction?

15 A Yes. It was my instruction to include alcohol. I
16 instructed the team to set up stability programs and to
17 generate the stability data and also to analyze that data as
18 it became available. During that analysis our main concern
19 was to ensure that the stability of ranitidine was not
20 adversely affected by the inclusion of ether alcohol.

21 Q I could direct your attention, Dr. Long, back to
22 plaintiffs' trial exhibit 64 to page Y060620, and focusing in
23 on the text, ethanol does not adversely affect the stability
24 of ranitidine, consequently the shelf-life predicted for the
25 formulation with ethanol should be similar to the formulas

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1 without ethanol.

2 Can you explain the context of that statement?

3 A Yes. In this discussion of results we were comparing
4 the results for the concentration of ranitidine in the
5 presence of ethanol and in its absence.

6 The data showed that the stability was not
7 adversely affected. In fact, there was an indication, a
8 strong indication that, if anything, it was the reverse, and
9 it wasn't until we came to write the NDA where we had two
10 sets of information, formulation without ethanol and
11 formulation with, that we actually studied the results in
12 detail to look at the effect of the alcohol. What I was
13 looking for, what the team was looking for was no adverse
14 stability, but we had the surprise that, in fact, the reverse
15 had occurred and there was a strong indication that by adding
16 the alcohol we had, in fact, enhanced the stability.

17 In the NDA we haven't claimed this but we have put
18 in the phrase does not adversely effect, which is a
19 qualifier, rather than to say the addition of alcohol does
20 not effect. So rather than leave it blank, that there is no
21 effect at all, we have said it's not adversely affecting the
22 stability.

23 THE COURT: Is your testimony that that was a
24 conscious decision to use the adverb?

25 THE WITNESS: It was, in that normally we would, if

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